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ABSTRACT

In an exploration of the comprehension process of the beginning reader, 16 first and second grade students were each asked to listen to two stories--one a narrative account and the other an expository passage-- and then immediately to retell them. Recall protocols were compared by propositional analysis for text-related superordinate and subordinate propositions and for text-unrelated propositions. In addition, superordinate and subordinate propositions from the recall protocols were mapped against the original text protocols to determine position within the text of the remembered material. Results showed superior recall of superordinate over subordinate propositions. In addition, narrative text was recalled more easily than expository text, and second grade children recalled more from both types of text than did first grade children. In expository text recall, first grade children seemed to rely on relationship to previous experience while second grade children combined relationship to previous experience with recency of presentation. The findings suggest that the comprehension process may change developmentally. (Author/FL)

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Story Type and Children's Recall

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Abstract

A great deal of research has recently been conducted in an attempt to understand and model the process of reading comprehension for the fluent reader. However, it is at least as important to understand the process of reading comprehension for the beginning reader. Previous research has suggested that there are no significant differences in the comprehension process between reading and listening tasks. Therefore the listening - recall task would seem to be a viable way of further exploring the comprehension process of the beginning reader.

First and second graders were asked to listen to and immediately recall two stories - one a narrative account and the other an expository passage. Recall protocols were compared by propositional analysis for text-related superordinate and subordinate propositions, and text-unrelated propositions. In addition superordinate and subordinate propositions from the recall protocols were mapped against the original text protocols to determine position within the text of remembered material.

Results show superior recall of superordinate propositions over subordinate propositions. Narrative text was recalled more easily than expository text, and second graders recall more from both types of text than did first graders. The propositional mapping showed a comprehension process for both first and second graders that follows the event structure of narrative text. In expository text first graders seem to rely on

relationship to previous experience, while second graders combine relationships to previous experience with recency of presentation.

The results suggest that the comprehension process may change developmentally. It may thus be necessary to construct theoretical models of the comprehension process that reflect the reader's developmental stage, and type of text to be read.

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Story Type and Children's Recall

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The struggle to understand the process of reading comprehension has grown in intensity during the past decade, as researchers such as Kintsch (1972) and Bransford and Johnson (1972) have taken new approaches to task analysis. Propositional analysis has provided an unrestrictive method of analyzing reader recall, freeing researchers from measuring comprehension in terms of questions that the researcher can think to ask.

As a result, a great deal of research has recently been conducted in an attempt to understand and model the process of reading comprehension for the fluent reader, and for the developing reader. Clearly, both lines of inquiry have important theoretical and instructional implications.

However, at least as important is the necessity to understand the process of reading comprehension in the beginning reader. Unfortunately, that presents some unique problems simply because the subject is a "beginning reader" with no or limited word recognition abilities. In a previous study by the author, propositional analysis was applied to children's dictated creative stories in an attempt to infer their underlying basis for comprehension of material read. Kintsch and Kozminsky (1977) have reported no significant differences for fluent readers between reading and listening tasks. Additionally, Kintsch (1977) has asserted that "performance on comprehension tasks after listening to a text provides a pure reflection of the comprehension processes themselves." (p. 491) Therefore the listening - recall task seems to be a possible vehicle for further exploring the comprehension process of the beginning reader.

Experimental Design

In this study eight first graders and eight second graders were asked to listen to two "stories" and then to immediately orally retell the stories. Subjects were selected on the basis of test scores and teacher judgement to represent the range of readiness or reading achievement skills typical of beginning first or second graders. The "stories" consisted of one narrative account called Taffy (Fig. 1) and one expository account called Crickets (Fig. 2). The accounts were slightly over 200 words long and had approximately equal sentence length and vocabulary load as measured by the Fry Readability Scale. Both accounts dealt with topics somewhat familiar to the children. To avoid biasing the results by a practice effect in the listening - retelling task, half of the children heard Crickets the first day, while the others

heard Taffy. After twenty-four hours the children were first asked to again retell the story heard the day before. They then listened to and retold the other story. All listening and retelling tasks were conducted individually.

The sixteen protocols resulting from the immediate retelling of each story and the eight, twenty-four hour delayed recall protocols for each account were compared to the original text by means of the Drum and Lantaff (1977) method of propositional analysis. Propositional analysis of the original text accounts were divided into a simple two-class superordinate/subordinate framework. A binary split was also carried out on the children's protocols. Propositions from the children's protocols which would be classified by Kintsch and van Dijk (1978) as reproductive or reconstructions were treated as text-related. All other propositions, those labeled text-evoked or text-external by Drum (1977) or metastatements by Kintsch and van Dijk (1978) were treated as text-unrelated. Text-related propositions were matched against the super-ordinate/sub-ordinate split of the original text.

Protocol Analysis

Insert Table 1

First graders immediate recall of narrative text was superior to their recall of expository text. Twenty-four hour recall by first graders showed relatively slight and roughly equivalent drops in text-related propositions across both text types.

Second graders immediate recall of narrative text was markedly superior to their recall of the expository passage. However, twenty-four hour recall of the narrative passage showed a considerable decline, while delayed recall of the expository text showed an increase of both

super-ordinate and sub-ordinate propositions, to a level of recall greater than that for the narrative passage.

Second graders were generally superior to first graders in their recall of both narrative and expository text under both immediate and delayed retelling conditions. Both first and second graders were approximately twice as likely to recall super-ordinate as sub-ordinate propositions under both text types and both retelling conditions. In addition, both first and second graders used more text-unrelated propositions in their immediate retelling of the expository passage than they did for the narrative passage. Conversely, on the delayed retelling they used fewer text-unrelated propositions for the expository passage than for the narrative passage.

In a further attempt to analyze the comparative effect of text type on the recall of first and second graders, the childrens' text-related propositions from immediate recall were mapped against the framework provided by the propositional analysis of the original text. For both first and second graders the propositional map of the narrative passage shows a rough adherence to the major events within the story, even where those events are not represented in the analysis by a super-ordinate proposition. These major events are represented in the recall protocols with roughly the same level of frequency regardless of their position within the chronology of the story. Second graders were simply able to provide more of the enriching details surrounding these major events than were the first graders.

Mapping of recall for the expository text showed a very different pattern. First graders' recall clustered around two statements occurring approximately in the middle of the passage. Second graders' recall

clustered around the same two statements, but from the introduction of the first of those statements until the end of the passage almost all propositions were reflected including a major clustering around the final super-ordinate proposition which had gone virtually unrecalled by the first graders.

Discussion

If the superordinate proposition is regarded as roughly equivalent to Kintsch's macroproposition, beginning readers show the same tendency as fluent readers to retain macropropositions over micropropositions. This relative superiority of retention of macro-propositions was not affected by text type.

Quantitative comparisons of immediate recall by beginning readers show the same pattern of superiority for recall of narrative text as reported by Lantaff (1978) in a study of developing and fluent readers; and seems to further confirm the value of temporal and causal relationships within text as facilitators of the comprehension process. The greater recall shown by second graders over first graders would seem to reflect their greater maturity, possibly longer attention spans, and perhaps more practice with listening - retelling or remembering tasks in their school experience.

Text type does appear to differentially affect the delayed recall of first and second graders. Several explanations are possible. One hypothesis suggests that this difference is related to previous instructional experience. First graders regarded the story line of the narrative account as equal in value to the facts presented by the expository passage, and thus made equal effort to hold both in long term memory. Second graders, on the other hand may have learned through their

school experience that "stories" need be retained only for immediate discussion, while "facts" must be retained for future tests. Although their original comprehension of the narrative passage was greater, the information received from it was not stored for long-term retrieval.

From an educational perspective it is also instructive to note how little was actually stored accurately from either text-type, again confirming the absolute necessity of providing many encounters with material that must both be comprehended immediately, and stored for future use. A few examples of the children's erroneous recall produced cricket beavers, frog crickets and grasshopper crickets but no mole crickets, crickets colored red, white, green, striped and spotted as well as black, boys named Bobby, dogs named James, and finally crickets that "lived happily ever after." These errors seemed to reflect an attempt by the children to fill in information from their experience backgrounds as the task got tougher (e.g. immediate recall of the expository passage and delayed recall of the narrative passage) as long as they still felt some possibility of succeeding. Since immediate recall of the expository passage had shown it to be a difficult task, the drop in text-unrelated propositions on delayed recall may reflect lowered expectations for success and thus fewer attempts to fill in poory understood areas of the text.

Mapping of the immediate recall propositions from both text-types further illuminates the role of experience background and expectation in the comprehension process of beginning readers. Recall of the narrative passage provided both first and second graders with a relatively accurate though simplistic summary of the important points in the story.

The first graders' recall map of propositions from the expository

passage seems to reflect neither the "leading edge" or recency models of the comprehension process. Instead, recall clusters appear around the appearance in the text of the words, "mother," "babies," and "father," words that carry a high value load in the experience background of the children. Recall by the second graders shows clustering around the appearance of these same terms coupled with a strong recency effect. As many propositions were recalled from the final 20 propositions in the original text as from the preceding 60 propositions.

These results suggest that there are developmental differences in the comprehension process that are at least in part effected by text-types.

Conclusion

Clearly results based on a sample size this small must be viewed cautiously. However, if future research validates these findings it would seem that we must look at the comprehension process as subject to developmental change. A model based on the performance of fluent readers may not provide an adequate theoretical base for instruction of beginning readers.

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Table 1

	Narrative "Taffy"						Expository "Crickets"					
	N	Superordinate - $\bar{X}$ N = 16	% of possible in text	Subordinate - $\bar{X}$ N = 58	% of possible in text	Text-unrelated - $\bar{X}$	N	Superordinate - $\bar{X}$ N = 6	% of possible in text	Subordinate - $\bar{X}$ N = 75	% of possible in text	Text-unrelated - $\bar{X}$
1st graders - immediate recall	8	1.5	25	6.5	11	3.3	8	1	17	5.4	7	8.9
1st graders - 24 hr. recall	4	1.5	25	4.2	7	7.3	4	.8	13	4.5	6	4.2
2nd graders - immediate recall	8	2.5	42	14.4	25	4.5	8	1.6	27	12.2	16	5.6
2nd graders - 24 hr. recall	5	1.2	20	10.6	18	5.6	3	2	33	16.5	22	2.5

Fig. 1

Taffy

Bill had a little brown dog and he called her Taffy. She was brown from the tip of her nose to the tip of her tail. Taffy like to ride in a car. She liked to ride anytime and anywhere. Bill lived far from school so his mother had to drive him there every morning. Taffy just loved that ride. When she saw the car in the driveway, her tail began to wag. It wagged as if it would come off.

One morning Bill was late for school. His mother was in a hurry and she did not want to take Taffy along. "No, no," she told the little dog. "You have to stay home this morning." No ride! Taffy's tail stopped wagging and she hung her head. "Hurry, Bill," said his mother as they got into the car. "My keys!" said Bill's mother. "I forgot my keys!" and she ran back to the house. There lay Taffy, right in the doorway. "Oh, all right, Taffy," she said. "Come along for your ride, but you will have to wait until I find my keys." Taffy jumped up, her tail wagging. Then Bill's mother saw the keys--the keys she needed to start the car. Taffy had been lying on them!

Adapted from "Taffy," Reader's Digest Reading Skill Builder, Level 2, Part 2, Reader's Digest Services, Inc., 1959, p.10-13.

Fig. 2

Crickets

One kind of cricket lives in a tunnel in the ground. He is known as the mole cricket. In front of his tunnel he clears a small patch of ground. This is his porch. He likes to sit there and chirp. The mole cricket's paws are his digging tools. They also make good oars when he is lost at sea in a puddle!

The lady mole cricket lays many eggs at the end of her tunnel home. She is a very good mother. If the weather is cool, she hides her babies under her six-legged body.

We know how cricket eggs hatch because scientists have watched them. Each egg has a lid like that of a cracker box. This lid is rather easy to push off. The baby cricket bumps his head against it. Off it pops! The tiny baby is pale at first. But by the end of the day he has turned to a shiny black, like his father. He is jumping around and waving his feelers.

A grown-up cricket is covered with a hard skin. He is a high jumper, and his jaws are very strong. In the insect world he is quite a champion.

Excerpted from "Cheerful Chirpers," Reader's Digest Reading Skill Builder, Level 3, Part 3, Reader's Digest Services, Inc., 1960,p.67-70